

Abstract

Despite Lolgorien being one of the most active gold mining areas in Kenya, it is one of the most geologically understudied areas. To the best knowledge of the authors, Lolgorien geological map was last updated in the 1940s. Current technologies such as remote sensing allow new structural features such as faults to be easily identified. In this regard, this study employed remote sensed data to map structural features found in and around Lolgorien Subcounty, Narok, Kenya. This was done to identify any new structural features that might have been missed in the past. Shuttle Radar 152 Topography Mission Digital Elevation Model (SRTM-DEM) image was downloaded and analysed using hillshade technique. From this analysis, the research identified new structural features which were not included in the current geological map but exist on the ground. One such structural feature (fault) is located approximately at 9866237, 703601 (Universal Transverse Mercator, UTM coordinates) and trends in NW–SE direction. The study also found that most of the lineaments are concentrated in the southern part of Lolgorien area and around or at areas dominated by the banded iron formations. Petrographic analysis of the few samples collected from the area showed presence of gold, pyrite and chalcopyrite mineralisation.